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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,666	08/17/2001	Paul W. Dent	ER-002-US / P14657-US	5094

7590 02/13/2004  
Gregory A. Stephens  
301 Edgemore Avenue  
Apex, NC 27502

EXAMINER

ELAHEE, MD S

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 02/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/932,666

Applicant(s)

AUL W. DENT

Examiner

Md S Elahee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 02. 6) ☐ Other: .

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 6, 7, 9<sup>1/2</sup> and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Saylor (U.S. Patent No. 4,313,183).

Regarding claim 1, Saylor teaches establishing a radio link between the station 1 (i.e., first RF equipped device) and the station 2 (i.e., second RF equipped device) (fig. 1; col.3, lines 30-33).

Saylor further teaches in the station 1 (i.e., first RF equipped device):

creating an acoustic waveform in the form of first FSK bit sequence (i.e., digital audio samples) (fig.1; col.3, lines 30-33, col.4, lines 10-15).

transmitting the first FSK bit sequence (i.e., digital audio samples) via said radio link (fig.1; col.3, lines 30-33, col.4, lines 10-15).

decoding (i.e., converting) the first FSK bit sequence (i.e., digital audio samples) to an audible FSK bit sequence (i.e., analog audio waveform) (fig.1; col.3, lines 30-33, col.4, lines 25-32).

emitting the audible FSK bit sequence (i.e., analog audio waveform) as an acoustic signal via a loudspeaker (fig.1; col.3, lines 30-33, col.4, lines 38-40).

Saylor further teaches in the station 2 (i.e., second RF equipped device):

receiving first FSK bit sequence (i.e., digital audio samples) via the radio link (fig.1; col.3, lines 30-33).

receiving the acoustic signal via a microphone (fig.1; col.3, lines 39, 40, col.4, lines 38-40).

decoding (i.e., converting) the received acoustic signal to second FSK bit sequence (i.e., digital audio samples) (fig.1; col.3, lines 30-33, col.4, lines 25-32, 38-40).

determining the time difference between the arrival of the first FSK bit sequence (i.e., digital audio samples) and the acoustic signal (fig.4; col.3, lines 44-66).

determining the distance between the station 1 (i.e., first RF equipped device) and the station 2 (i.e., second RF equipped device) based on the known speed of propagation of radio waves, the known speed of sound, and the time difference between the arrival of first FSK bit sequence (i.e., digital audio samples) and the acoustic signal (fig.4; col.3, lines 44-68, col.4, lines 1-4, col.5, lines 17-23, col.7, lines 29-39).

Regarding claims 2, 7, 10 and 13, Saylor teaches comparing the first digital audio samples against the second digital audio samples to make confirmation that the FSK sequence represents the proper transmitted output (i.e., determine if they match, and if the first digital audio samples match the second digital audio samples), then performing the determining the time difference between the arrival of the first digital audio samples and the acoustic signal (fig.4; col.3, lines 40-66).

Regarding claim 4, Saylor teaches terminating inherently an exchange of further radio messages between the first and second RF equipped devices if the distance determined is greater than a threshold value (col.8, lines 26-40).

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Regarding claims 6, 9 and 12 are rejected for the same reasons as discussed above with respect to claim 1.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 8, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor (U.S. Patent No. 4,313,183) and in view of Andreason (U. S. Pub. No. 2003/0008612).

Regarding claims 3, 8, 11 and 14, Saylor fails to teach "said radio link is Bluetooth<sup>TM</sup>". Andreason teaches that the radio link is Bluetooth<sup>TM</sup> (page 2, paragraph 0036). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saylor to allow the radio link being Bluetooth<sup>TM</sup> as taught by Andreason. The motivation for the modification is to have doing so in order to communicate between two wireless terminals using short range radio link.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor (U.S. Patent No. 4,313,183) and in view of Aaro et al. (U. S. Patent No. 6,662,020).

Regarding claim 5, Saylor fails to teach "terminating the performance of a financial transaction". Aaro teaches terminating the performance of a financial transaction (col.2, lines 32-36). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saylor to allow terminating the

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performance of a financial transaction as taught by Aaro. The motivation for the modification is to have doing so in order to provide ensure the security of the data contained in memory.

*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alam Elahee whose telephone number is (703) 305-4822. The examiner can normally be reached on Mon to Fri from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (703) 305-4895. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

M. E.

MD SHAFIUL ALAM ELAHEE  
February 7, 2004

FAN TSANG  
SUPERVISORY PATENT EXAMINER  
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